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1. Introduction

For centuries books remained the predominant carrier of knowledge and information. At the dawn of the 21st century, however, this paradigm is about to shift towards an electronic information processing world. This technological change empowers text and information with hyperfunctionality and enforces the ongoing digitalization of all written information.

But not only the way we process and manipulate text has changed drastically. The electronic availability of texts generates new behavioural patterns in association with them. Electronic text, ubiquitously available, can easily be changed, reproduced, sampled, copied etc. and therefore never achieves a final form. The originally stringent separation between authorship and readership is successively dissolving. The future reader will increasingly be called upon to participate in the process of producing texts, and turn from a passive consumer to an active producer. The concept of „Dynament“ featured in this thesis shall support this process in a way, that electronic texts can fully tap their potential in regard of functionality on the one hand, and still bear up their information carrier capabilities on the other hand.

Dynamant is a tool for intuitive, dynamic reading and commenting of Web content.

2 Background research

The research part is divided into two subsections. Firstly it covers a short retrospective of the so far predominant information carrier (namely the book) and researches on behavioural changes in association with text as a general term.

Secondly it brings up recent attempts of providing users with metaphors and assistance for dealing with electronic text. It categorizes and entitles existing examples and references showcase-material to each category. The examples are shortly reflected by emphasizing potential and intercepting weak points

2.1 The Future of the Book

2.1.1 The Book as a physical appearance

Over the last five thousand years there have been four transformations of the "book" in which each manifestation has differed from its predecessor in shape and structure. The successive, sometimes overlapping, forms were: the clay tablet inscribed with a stylus (2500 B.C.- A.D. 100), the papyrus roll written on with brush or pen (2000 B.C. - A.D. 700), the codex originally inscribed with pen (A.D. 100) and the electronic book, currently in the process of innovation.¹ There have also been three major transformations in method and power application in reproducing the codex: machine printing from cast type, powered by human muscle (1455 - 1814); nonhuman power driving both presses and typecasting machines (1814 - 1970); and computer driven photocomposition combined with offset printing (1970 - today).²

2.1.2 Text as an instrumental purpose

With the evolution of the physical appearance of the book and the reproduction methods of its content, drastic changes occur simultaneously in the way texts are read and interpreted.

Before the broad publishing of books in the beginning of the eighteenth century, the bible remained the only book available for the majority of people. With the proceeding alphabetisation and the emergence of Romantic novelists the Reading-Revolution took its turn. The intensive rereading of biblical texts was replaced by extended reading of a new variety of books.³

But not only the written word underwent a development, through standardisation and the aggregation of speaking, writing and reading, language as a whole developed to a general, purified and homogeneous phenomenon at the end of the 18th century.⁴

In the second half of the 19th century, however, a consolidation of human perception and thinking process on the one hand, and the development of technical achievements on the other hand, caused a sudden end to the 18th century anecdote of animus:⁵ In contrast to the Renaissance doctrine, which declares the human to be the ultimate benchmark, technical devices are from now on the basis of human achievements.⁶ The ongoing

technical specification leads to a proceeding dehumanisation; the more the information production is technologically mechanized the more dispensable the human becomes.⁷ The human as narrator and transmitter of information becomes gradually replaced, first by written language, later by multimedia. In these new multimedia environments, texts represent just another form of illustrative images and the pages of a book turn into a pattern of images.

In the light of the predominance of these images, not only the writing, but also the language is plunged into a crisis of identification. The redundant ambiguity of language is exceeded by the accurate logic of reference, of digital images.⁸ Information is digitalized and rationalized and thereby functionalises not only knowledge, but also experience and education.

Vilém Flusser phrases as follows: "Die Welt kann man nicht erzählen, dafür aber zählen." (the world cannot be narrated but counted).⁹ In all apparatus the thinking in numbers prevails the linear historical think-approach of written information.¹⁰

This paradigm shift from linear text -to hypertext -information-processing, combined with the technological achievements, leads to a change in text perception and thereby also changes all kinds of reading behaviour. We are at the beginning of a transition, in which digital texts are read and perceived in an antiliterary but informational kind of way.¹¹

2.1.3 Technology Lifecycle and false pretenders

Raymond Kurzweil proposed seven stages in the life cycle of a technology.¹² In his article about the future of the book, he also introduced the term "false pretenders", which are an accompaniment of every technological life cycle. He writes there: "An upstart threatens to eclipse the older technology. Its enthusiasts prematurely predict victory. While providing some distinct benefits, the newer technology is found on reflection to be missing some key element of functionality or quality... conservatives take this as evidence that the original approach will indeed live forever. Shortly thereafter, another new technology typically does succeed in rendering the original technology into the stage of obsolescence."¹²

This development can easily be demonstrated by the information-carrier of music and sound, which developed over recent centuries from the long-playing record to a digital memory unit.

As for the book it can be assumed that the false pretenders were the first generation of electronic books which tried to represent the physical book in a digital form, rather than deconstructing and reconstructing it textually, behaviorally and commercially.¹³

This first generation of E-Books offered dramatic qualitative and quantitative benefits, but still lacked qualities such as the superb visual characteristics of paper and ink. From the technological point of view we can expect that a lot of these missing qualities will soon be resolved or are so already.

2.1.4 The future of the Book

In a discussion about the future of the book, broadcasted on 16 December 2009 on the Canadian TV channel TVO, Marshall McLuhan is quoted: "When a technology is obsolete for its instrumental purpose, it gets something else." The participants heavily agreed upon the fact that the book as a physical appearance will co-exist to digital text, but is very likely to change in its purpose and turn more towards an artifact or a personal accessory.

Further the majority of the discussion attendees proposed to make at least a minimal distinction between fictional and non-fictional texts. Bob Stein from "The Institute of the Future of the Book", however, spoke from consolidation of all kinds of texts and propagated that they will henceforth not only be produced but also consumed and perceived in a collaborative kind of way.

2.1.5 Preliminary conclusion

I consider texts, and therewith books, as informational entities and conclude, that they are strongly subjected to demographical, technological and cultural conditions. As fundamental paradigm shifts happen in these fields, the informational entities follow automatically (reluctantly or voluntarily). On account of this, activities as reading must be reconstructed and reconsidered fundamentally.

2.1.6 Basic Finding

Making electronic pictures of books is a reasonable and comprehensible phase at this point in the evolution of electronic texts, comparable to the way that early automobile designs strongly resembled the 'horseless carriages' that they indeed were. Yet it is not necessarily a paradigm that will, or should, be adopted in the longer term, as new ideas and technologies start to allow us to escape from the limitations of a collection of bound pages.

A book works well as an information and presentation device, that can be used to store a variety of different kinds of information and offers practical access methodologies. The basic structure of the book and the way it is used, however, is merely unchanged since the invention of the codex (A.D. 100).¹ Further developments, such as the movement from papyrus to paper, the introduction of moveable-type printing and the adoption of the index, have proven to enhance the accessibility and usability of books, but none of them stands for a paradigm shift to a transformational degree. The so far latest stages of this evolutionary refinement in the electronic era have included making the pages visible on an electronic screen, making the text searchable and embedding multimedia.

So if we simply transfer the traditional linear process of 'reading a book' into the world of the e-book, we run the risk to misinterpret both 'reading' and 'book' in the electronic age. We will be in danger of not only creating misconceived electronic solutions, based on this single model, but also of missing opportunities to enhance each of these separate experiences through appropriate (and distinct) new technologies.

Based on these findings I construct the following hypothesis:

The functional aspects of text as an information-carrier remains the foundation but has to be reconsidered in regard of cultural paradigm shifts. Information contains not forcibly written text but rather describes dynamic, functional and interconnected images, which demand a new understanding and new didactics in the field of reading. It is essential to thoughtfully design new reading experiences, in order to preserve cultural diversity in a binary world.

2.2 Research and Examples

2.2.1 E-Book as book metaphor

Electronic books commonly in use today are primarily computerized representations of physical books. They may be scanned page images (viewable as PDFs), or re-flowable text streams that are reconstructed by a software application to resemble pages on a reading device. The same principle is effective for reading behaviour such as page flipping, highlighting and annotating.

Provided it exists a separate device on which the text is consumed, the same principles are applied: The Amazon Kindle e-reader device resembles in its size and form very much a book and its interface copies the inherent simplicity of such. To drive the analogies even further, the blogging communities speculate about a touch screen based successor of the current Amazon Kindle. Touch technology was not yet introduced into the field of e-readers because of its high reflectivity and the loss of reading joy in bright environments.¹⁴ Another new technology, highly interesting for the e-reader business, is the flexible display, presented by the Arizona State University in June 2008¹⁵.

With reference to my hypothesis, I consider it disputable, whether these book analogies meet the demands of future reading behaviour. We can assume that technological progress will enable us to reproduce books with all their virtues, in a digital form.¹²

The question that emerges is, if there is not a more suitable reconstruction of a reading experience, that takes into account the cultural and sociable changes society undergoes in the information age.

Examples: Amazon Kindle¹⁶, 3Book¹⁷, Flipper¹⁸

2.2.2 E-Books as databases

An example of a significant migration away from the traditional book model, that is already taking place, is the way in which dictionaries, encyclopedias and other similar reference materials are rapidly becoming searchable databases. The creation of these

encyclopedias is mostly done collaboratively and often voluntarily. The quality of its content is as accurate as the one of a professionally published book-form encyclopedia.¹⁹ A reference book in the physical world is not turning in an e-book at all, but into an electronic searchable database of discrete factual components.¹³ This transformation of encyclopedic content from book-form to digital succeeded in a first step, in so far that it is no longer perceived as a book and future generations of human beings will most probably no longer think of encyclopedias as such artefacts. However, encyclopedias have always differed from 'ordinary' books in terms of access requirements, flow of reading and were always closest to the new 'informational' way of reading.

The big potential of this transformation lies in the change from static to dynamic: The dynamic sampling of information in these databases is manifested in the dynamic factual content, which may change over time and which, in an ideal case, is always up to date. That way the factual information itself gets a history of its own.

Furthermore contents are generated in a participatory kind of way, and can therefore be discussed and reflected upon and are never exposed to mere subjective argumentation.

Examples: Wikipedia²⁰, Leo.org²¹

2.2.3 E-Books as Viewable Resources

Perhaps the most successful use so far of 'traditional e-books' (i.e. e-books based on the existing printed book model) is electronic access to academic monographs via publisher or aggregator repositories. This model deals as a reference tool to access not just a single item of data as in an encyclopedia, but a larger element of textual description and serves as a quick and convenient way to scan publications to identify items of potential interest. This model more or less represents the old world, thus enhanced by features as full-text search, hyperlinking indexes and bookmarking. Most limitations of this model lie in the way texts can be copied and reproduced. The biggest obstacle is the understandable hesitation of publishers to make the electronic version of their books available, given the devastating effect that illegal file sharing has had on the music-recording industry.¹²

Otherwise it does not make sense to produce texts digitally and then replicate and distribute them in an analog form. It's a detour from digital to analog and will end up digitally again. This has also economical impacts, Dan Clancy, Engineering Director for Google Books, makes following statement: "...previously books went out of print, cause the costs of manufacturing and distribution exceeded the economic potential of that book. In a digital world the cost of distribution is close to zero."²²

However big the potential of this model appears, its commercial and judicial implications are extremely complex and are no more investigated in this paper.

2.2.4 E-Books as Collaborative Narration

Bob Stein from 'The Institute of the Future of the Book' explained in an interview: "The novel only emerged in English in 1754, that form is going to change. My favourite example these days is World of Warcraft, the way you play it with a group of people... it affects the players, the readers to write the narrative as they go, it's a form of fiction. We are at the very beginning of new forms of expression and the novel as we know it will no longer be the center of narrative, of fictional expression." He further explained that solitary reading was a quite recent development and that previously in history, reading was not allowed to everybody and was often practised as a group activity.²³

There are several projects featured by 'The Institute of the Future of the Book', which focus on the collaborative approach, where actually users create the narrative.²⁴ There is also a project mentioned, where seven women read collaboratively "The Golden Notebook" by Doris Lessing, which lead to a completely new reading experience and new insights into the text.²⁵

From this I deduct, that collaborative reading seems to be a very interesting approach for the future of reading. The main question is, whether this form of reading experience, which seems to work out well for fictional texts, is also applicable for scientific texts and non-fictional literature where imagination has a completely different focus.

Examples: The Institute of the Future of The Book²⁴, bookglutton²⁶

2.2.5 E-Text and Interaction

Electronic texts harbour a lot of interactive potential. Let alone the integration of multimedia content offers countless possibilities to enhance the reading experience. To narrow the field of activity, this text distincts between the 'interaction as a consumer' and the 'interaction as a producer'. The part 'Interaction as a consumer' focuses more on the experience and usability of reading, whereas the part 'Interaction as a producer' rather addresses the scientific reader, who interacts with the text by bookmarking, annotating, abstracting texts.

2.2.5a E-text reading and Interaction as a consumer

Reading in a leisure context is accomplished in different forms. Novels, biographies, newspapers, magazines and likewise are mostly consumed in free-time and is considered a recreational activity. With the introduction of electronic media into the reading realm, it is crucial to maintain these inherent recreational effects of the reading experience. At the same time electronic media contains a lot of potential to enhance this very experience.

A highly inspiring example in that context is the "Digital-Magazine"-Prototype of 'Bonnier' based in Stockholm, which takes into consideration the formats and emblems of print style magazines and translates the language and reshapes the contents to an electronic representation, which is accessible through an e-reader.

Bonnier consciously refrained from implementing a print-magazine-alike page flipping metaphor, since it does not "feel very honest to the form of the screen" as Björn Jeffrey recalls, and instead prefers an animated scroll function.

The e-reader works with simple natural touch gestures and has a convincing editing mode, which is "heated" (activated), by rubbing (tracked through gesture recognition) on the display.²⁷

Another interesting example in this area is the SI-Tablet (Sports Illustrated Tablet) featured by 'thewonderfactory' based in New York, which is similar in form (picture and text) as the above mentioned prototype. In contrast to the Bonnier solution, SI-Tablet already focuses on content data and shows exemplarily how this, in the showcase statistic sports data, can be interconnected and enhance the reading experience. This leads to a highly personalized, self-narrated form of reading.²⁸

In my opinion, it is arguable whether the above mentioned reading experience can be imposed onto other text forms. The level of imagination which the medium demands from its user, defines to which extent the creation of akin experience supports or incommodes the reading process. The level of imagination in novels is completely different from the one in a magazine. A magazine 'outsources' imagination by populating its texts with photographs and images, whereas a classic novel lets the reader imagine nearly everything on his own.

This leads to the conclusion that not every model fits to every text. Or as Marshal McLuhan puts it: The medium is the message.²⁹

Examples: Digital-Magazine-Prototype (Bonnier)²⁷, SI-Tablet²⁸

2.2.5b E-text reading and Interaction as a producer

Computer software vendors have primarily focused on the authoring task, with products like Microsoft Word. The industry slowly realized that, in fact, the most pervasive activity around documents is not authoring but reading, followed closely by annotating, then collaborating, and finally authoring.³⁰

There is a large target group that annotates daily, but does not create new documents. For them research has introduced techniques for combining pen-and-paper with interactive computing. These augmented interactions provide a fluid and flexible input interface to fulfill their tasks.³¹

All solutions covered in this research, use a hardware pen to record annotation data and replicate them digitally to a computer, where it is further processed and integrated in the e-text. Often special paper is required to use annotation techniques, which has a negative influence on the usability of such solutions.

In reference to my hypothesis, I suppose that there will be a fusion of annotations and e-text towards a more dynamic model or image. There is also a lot of potential in the field of annotating and collaborative authoring, which is technically not yet exhausted.

Examples: Livescribe³², Adapx³³, Anoto³⁴

2.2.6 Apple iPad topping it off

The newly released Apple iPad is ahead of the above mentioned examples. It is a combination of the e-book metaphor and the e-book as a database and on top of it provides excellent interaction patterns as well as internet connectivity. The iPad seems to gracefully bring all these worlds together.

Example: Apple iPad³⁵

2.2.7 E-Reading Behaviour

From a phenomenological point of view, reading electronic texts on a screen is a far different experience than reading printed text in a book. This leads to new reading behaviours which are analyzed thereafter.

2.2.7a E-Reading vs. Print-Reading

Difficulties readers are confronted with when reading on a screen are summarized as follows:

Cumbersome navigation, a lack of overview of the document, lower tangibility of electronic documents compared to paper, an unclear awareness of the length of documents, lower reading speed caused by the poor resolution, learning of lower quality compared to paper documents and possible fatigue if reading for extended periods of time.³⁶

Combined with the abundance of electronic information these inconveniences lead to new reading behaviours, which result in a higher reading-pace and fragmental reading.³⁷ Texts originally written to be read continuously are all of a sudden consulted and queried as a quick fact extraction and brief reference-viewing.³⁸ Furthermore, the hyperfunctionality

of text harbours a tremendous potential of distraction and demands discipline and concentration in order to focus on the topic.

2.2.7b E-Reading and Phenomenology

Along with this new reading situation, comes the intangibility and volatility of the digital text: "Digital texts are ontologically intangible and detached from the physical and mechanical dimension of their material support, namely, their computer or e-book (or other devices, such as the PDA, the iPod or the mobile phone)." ³⁹ The reading experience includes manual activities and haptic perceptions (what the skin and muscles and joints register), and so as activities and perceptions of that kind are changed from one kind of reading experience to another because of the object, the reading experience, too, will change.

Implemented touchscreen technology tries to take into account this loss of haptic sensation, but is not coercively the answer for every e-reading solution. Or as Bill Buxton, Principal Researcher Microsoft Research, puts it: "Anyone who says, touchscreens are better than mice don't know what they are talking about, if they don't qualify, for what, for whom and under what conditions a technology is used..." ⁴⁰

2.2.7c E-Reading 2.0

Due to Alan Liu, chairman and professor of English at the University of California, Santa Barbara, E-Reading disturbs the balance between focal and peripheral attention.⁴¹ This effect is an implication of the introduction of a new medium.

Nowadays Web 2.0 applications do a poor job balancing focal and peripheral attention. "We suffer tunnel vision, as when reading a single page, paragraph, or even 'keyword in context' without an organized sense of the whole...".⁴¹

One scenario for future reading is a shift from linear structure to something more dynamic culminating in a social experience.

3 Context/User/Technology Inquiry

3.1 Mental Model

A mental model is an explanation of someone's thought process about how something works in the real world. It is a representation of the surrounding world, the relationships between its various parts and a person's intuitive perception about their own acts and their consequences. Our mental models help shape our behaviour and define our approach to solving problems (think personal algorithm) and carrying out tasks.⁴²

In order to establish a mental model about the topic of E-Reading I established a series of sketches. The purpose of these sketches is not to focus on a particular design problem (even though they may address one) but serve as visual analysis of 'electronic text' as a general term. They serve as a visual dictionary which I reuse and refer to during ongoing sketching phases. In this document each sketch comes along with a brief explanatory description.

3.2 Inquiry Definitions

The target of my project is to establish a working prototype which conveys principles of new reading behaviours with electronic text. To draw a clearer project outline, I have to constrain the above mentioned global text definition. This constraint will automatically lead to a more specific user group.

3.2.1 Text Form

In order to achieve the goal of segregating a suitable text-type, I applied the methodology of the morphological analysis. In the analysis I compared the following electronic text-types: blog, twitter, news, magazine, encyclopedia, web 2.0 platform (e.g. facebook), fiction, archives and comics.

The analysis consists of sketches of the text-types and the corresponding morphological combinations. In the sketches I made minimal distinctions between alphanumerical text-information and images. The initial ideas featured in the mental model sections were taken into account as well.

The analysis reveals an aggregation of the alphanumerical- and image-like text-information in newer media types such as blogs, web 2.0 platforms or e-magazines. Particularly web 2.0 platforms take on comic-like features. There is as well an ongoing patchwork process to be observed: all types of texts are merged and resampled within each other.

As for my prototype this means that I have to find a straightforward text-form, which contains a certain amount of information, to make the process of interacting with them interesting.

The most suitable text type proved to be some kind of an archive. Archives represent an inherently closed system, containing alphanumerical and image information.

An online research about existing archives lead me to the library website of zhdk, where I scanned existing archives for usefulness in context to my project. I decided to take the free to use online archive of "Das Magazin" as momentarily basis. Due to the following reasons: First of all covers the online issue the above mentioned arguments for an effective inherently closed system. Further represents 'Das Magazin' an easily recognisable format which responds to a broader mass of people (this fact seems crucial to me in regard of the Bachelor Presentation). Furthermore directs 'Das Magazin' over a plain visual appearance and features articles meeting the demands of a specifiable reader group.

3.2.2 User Group

Much information about the user group is anticipated by the text-type definition mentioned above. Further constraints are made here: The user group addressed in this project possesses over modest to advanced computer skills and is used to e-reading in some kind of way. The average user interviewed in the following section called 'Cognitive Walkthrough' is between 20 and 40 and needs the internet daily for research, work or study.

3.3 Cognitive Walkthrough

3.3.1 Walkthrough setup

The cognitive walkthrough method is a usability inspection method used to identify usability issues in a piece of software or web site, focusing on how easy it is for new users to accomplish tasks with the system. The method is rooted in the notion that users typically prefer to learn a system by using it to accomplish tasks, rather than, for example, studying a manual. The method is prized for its ability to generate results quickly with low cost, especially when compared to usability testing, as well as the ability to apply the method early in the design phases, before coding has even begun. .

The Cognitive Walkthrough performed for my inquiry, was executed with 15 probands matching the above mentioned profile. In the beginning I filmed the proband's screenactivity. After 5 probands I changed this procedure since the user's screenactivity while reading, was not very insightful. Substitutionally I started recording the interview-part after, since this revealed more insights into the probands's activity.

The goal of the Walkthrough was on the one hand to find out general reading behaviour and pin down research- and text sampling patterns. On the other hand it is set up to reveal unknown user behaviours. To get this information out of the Cognitive Walkthrough I structured it as follows:

- 1) Choose one of the following three articles, which seems most appealing to you. Read this article as if you were alone.
- 2) Imagine the chosen article was part of a research for which you want to reuse some excerpts.
- 3) Isolate these excerpt in your natural way of behaviour.

After observing the probands performing the above task for about 7 minutes I interrupted and went over to the interview part, which covered following questions:

- 1) How did you read the text? (whole, from A to Z, linear, fragmental, not linear?)
- 2) How and where have you isolated the excerpts

- 3) Did you read the comments to text?
- 4) Did you miss anything (assistance, aid) reading the text?
- 5) Would you read such articles on a smartphone

3.3.2 General Reading Behaviour

None of the probands read the text linear from A to Z. Most were concentrated while reading the first paragraph and then started with fragmental reading. The fragmental reading then was performed differently. The most frequent behaviour was a fragmental but linear reading. A reading behaviour often applied in print documents likewise. Another common manner after reading the first paragraph, was to scroll down to skim the text volume. The general reading behaviour differed very much from proband to proband. Where some read very slow and calm, others executed a lot of scroll activity which appeared nervous to an observer. "In a research situation I would have printed the whole text in addition to my digital notes..."

Simone Rohrbach, 23, Physiotherapist

3.3.3 Research Behaviour

Only one proband took notes on a physical sheet of paper, everybody else processed the text using a text processing program or widget. Two-thirds of the probands performed the research task simultaneously to reading, while one third preferred to first read the article and then work through it again. Less than one third of the probands made additional annotations to the copied text excerpts. One proband copied the whole text to a word processing program and then started to delete the unwanted paragraphs (I refer to this method as subtractive method).

3.3.4 Comments

More than one third of the probands indicated to have read the comments as well. Two were not interested at all in comments, and about the half indicated to generally have interest in comments but that they had not had time enough to read them or were simply

not aware of them. Three probands declared that for them comments are generally more important than the main article.

"In extended electronic texts it would be very helpful to have a functionality to bookmark paragraphs and add comments digitally..." Florian Wille, 29, Industrial Designer

3.3.5 Proband Inputs and Wishes

Most of the probands were confused by the combination of reading and researching in the context of the given articles and stated that the research task may have influenced their reading behaviour. Some wished more structure in form of meta information in the text, in order to get the useful information faster. Some wished the comments were better integrated in the text. Almost everybody felt uncomfortable opening an additional program to isolate text excerpts. Four probands mentioned that print is still very important to them and that, in a research context, they would print the article or would like to have at least an abstract to be printable.

More than once the wish for more accurate bookmarking (outermost in longer texts) was uttered. Those probands wished to be able to set bookmarks to pages and in the bookmarks anchors to retrieve the corresponding paragraphs. Software Architect Nils Richter declared this fact to be less absolute by saying: "To me it is much more important to retrieve a website than a paragraph. If I find the corresponding website I will easily be able to find the paragraph, but this does not work vice...".

Although the Cognitive Walkthrough with 15 persons is far from being representative, it offers me a lot of insight and in a certain way expresses and considers user wishes and reveals difficulties.

A main point is the application area of electronic text. In regard of this, the example of "Das Magazin" did not proof to be a good example for research tasks, since the probands were mostly confused and would not use suchlike texts in that context. The discussion with the probands revealed that the research task would make much more sense in a daily newspaper. Probands with political interest or involvement showed legitimate interest in a tool to research in Newspapers and follow or even share their research activity. I therefor consider to extend future inquiries in that direction.

3.3.6 Walkthrough Conclusion

The general e-reading behaviour differs from user to user and takes on strongly individual features, but there is a general tendency towards a fragmental and skimming-like reading, where text (or an article) as a whole loses in value. There is potential to support this reading behaviour by reconstructing and empowering the structure of a text with hyperfunctionality and meta-information enhancement. In addition, participatory phenomena such as comments or ratings, are highly appreciated by the readers and can further help to enhance electronic texts. With regard to comments it is important to adhere, that their potential is not exhausted yet, since user show general interest in comments, but do not read them. This discrepancy is rooted in the wrong interpretation of role of comments and harbours tremendous improvement potential.

The fact that nearly all the probands used a text processing program to sample text, leads to the conclusion that there is a need for facilitating such research tasks on the reading device (computer) itself.

Although writing about digital text the analysis revealed, that mainly in the research context, there is still a demand for something printed. This fact should not be neglected, since the paradigm shift from paper to screen does not happen over night and demands thoughtful interaction design.

3.4 Focus on Comments

The data from the user tests from Inquiry 01 are the basis for my further investigations. The focus herein is on comments. The reasons therefor are the following:

More than one third of the probands indicated to have read the comments in the Walkthrough.

The others indicated that they are interested in comments, but did not read them because they had not enough time or were simply not aware of them. Only two probands indicated to have no interest in comments. Three probands declared that for them comments are generally more important than the main text. Only one user does also write comments.

These figures match pretty well the often quoted 1 % rule which says, that if you get a group of 100 people online then one will create content, 10 will interact with it (commenting or offering improvements), and the other 89 will just view it.⁴³

In regard to comments I conclude that the comment as text-form is generally interesting and informational but not put well on stage. The focus of the further investigation is on the 89 % who only read comments.

3.5 Research on Comments

Comments are among the oldest kinds of user-generated content on the Web and virtually all types of objects are being commented, be it texts, images, songs, videos, products, and personal profiles.⁴⁴

Comments are strongly dependent on the object or text they comment. In this research part I divide it as follows. Each section is descriptive and lists advantages and disadvantages:

Comments on News, Comments in Forums, Comments on Images, Comments on Video, Comments on Audio, Comments on Products, Comments on Profiles

3.5.1 Comments on News

Depending on the exact context, comments on news are rather short and mostly of argumentative nature. Discussions are partially lead on a low level and there is a lot of junk.

There just few meta-information such as author and date of creation. The potential interaction is limited to hyperlinks and discussion possibilities. As News itself, comments on News are generally a ephemeral phenomenom (maximally one week).

Examples:

Spiegel Online

The screenshot shows a forum post from 'Heute, 09:41 Uhr von Heute - Welche Seite' with the subject 'EU-Kommission vereinfacht Handy-Telefonate auf See'. The post contains text in German and a link to a larger version of the article.

Heise Online (1)

The screenshot shows a forum post from 'Heute, 09:41 Uhr von Heute - Welche Seite' with the subject 'EU-Kommission vereinfacht Handy-Telefonate auf See'. It includes a list of users who have voted on the poll: 'Leinwand, Jerry' (21.03.10 20:01), 'Cachetado Dreame' (21.03.10 19:14), 'VonHerr' (21.03.10 19:13), and 'Meewiechart' (21.03.10 19:00). A poll question is also visible.

Heise Online (2)

The screenshot shows a forum post from 'Heute, 09:41 Uhr von Heute - Welche Seite' with the subject 'EU-Kommission vereinfacht Handy-Telefonate auf See'. It includes a poll result: 'Telefonieren auf Schiffen kann ins Geld gehen' (Meinungspool) with 1000 participants since 30.04.02. The result is: 'Grund: die Reedereien beauftragen manchmal Mobilfunkanbieter mit Firmensitz außerhalb der EU oder sogar außerhalb Europas mit der Errichtung der Bordnetze. Folge: das Schiff kann nicht zum Netz des Staates angeschlossen werden. Das bedeutet, dass der Sitz des Schiffes nicht dort ist, wo die Reederei ihren Sitz hat, sondern zum Netz des Staates, in dem der Schiffsbetreiber ansässig ist. Und wenn letzterer nicht in Europa oder den USA ist, dann kann es zu entsprechend hohen Roaming-Kosten kommen. Schon mancher hat da eine unangenehme Überraschung erlebt. Auch wenn man sich an Land in der Nähe von Kreuzfahrtschiffen aufhält, sollte man vorsichtig sein (es kann passieren, dass man auf dem Schiff seine Gespräche abgeschnitten werden muss, wenn ein Schiff im Hafen liegt).'. The post ends with 'Gruß' and 'mf'.

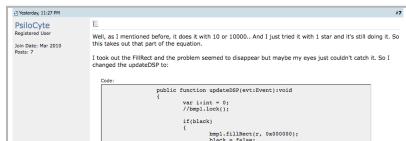
Room for improvement: Hard to keep an overview. It's hard to keep track of a discussion. Posts are listed chronically and not by relevance or users interest. It's hard to make reference to the text.

3.5.2 Comments in Forums

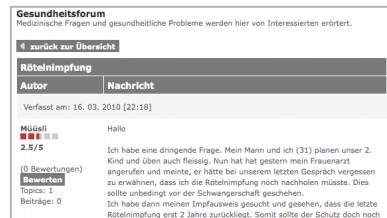
Comments in Forums are for special interest groups and commonly communicate knowledge, or feature discussions and propose help. The discussions are lead on a more sophisticated level than for example in comments on news. Depending on the forum the comment-texts can grow quite big. There are a lot of hyperlinks to other discussion threads in the same forum. Comments in Forums are long-lasting.

Examples:

Actionscript.org



Beobachter Forum



Room for improvement:

Hard to keep an overview. It's hard to keep track of a discussion. Posts are listed chronically and not by relevance or users interest. It's hard to make reference to the text. Since the newest entry is on top, it may happen, that the relevant information is no more quickly accessible.

3.5.3 Comments on Images

These comments refer to an image as a whole, or to a certain part of an image, which can be made highlighted. There is a strong Web 2.0 affinity and a lot of groups featuring awards for the most beautiful pictures. Comments are often made by posting pictures instead of alphanumerical text. Evaluation is a very important feature of Image-commenting.

Flickr



Picasa



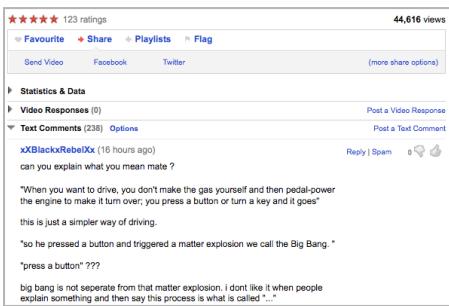
Room for improvement:

Structure of comments is often unclear. A lot of images disrupt the appearance of the site. If many people comment on sections in the image it is unclear who references which section and how the situation came about. The Web 2.0 connection steals the main focus of commenting the image itself.

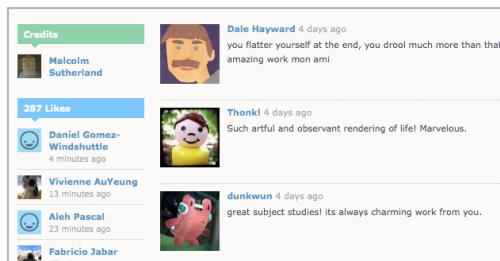
3.5.4 Comments on Video

Videos are very frequently commented. Discussions are held and there is a lot of junk. Video comments are durable and written independently of time (unlike news comments). There is a strong evaluation affinity in video comments. Also important are time-line referencing and video responses.

Youtube



Vimeo



Room for improvement:

Structure of comments is often unclear, due to amount of comments. There is no possibility to parallelly watch the video and read the corresponding comments. Comments may tend to have nothing to do with the video itself and may therefore seem context-

alienated. Time as a inherent component of the video is not reflected in listing the comments chronically.

3.5.5 Comments on Audio

Comments on Audio are applied in special interest groups as DJ's or musicians when they talk about their tracks. It's possible to make a comment at a certain point in the timeline of the music-track. These comments have a strong contextual binding to the track.

Soundcloud



Room for improvement:

Limited discussion possibilities. Limited amount of comments. If many comments exist an overview problem will occur.

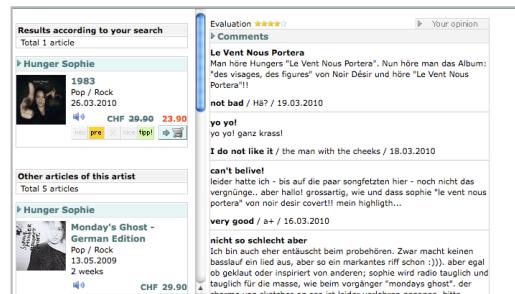
3.5.6 Comments on Products

Comments on Products are made based on the users experience. Beside a descriptive text (which can get quite extensive) an evaluation for quick reference is performed. Comments on products have are durable as well. There are by far more positive product feedbacks than negative ones. Discussion may take place, but usually it is single opinion on a product.

Amazon



Cede.ch



Room for improvement:

Hard to keep an overview. Hard to know what is the relevant information for me.

3.5.7 Comments on Profiles

Are usually short in size and not of longevity. There may be discussion. Content is often social and of low informational content. Can be very personal depending on context.

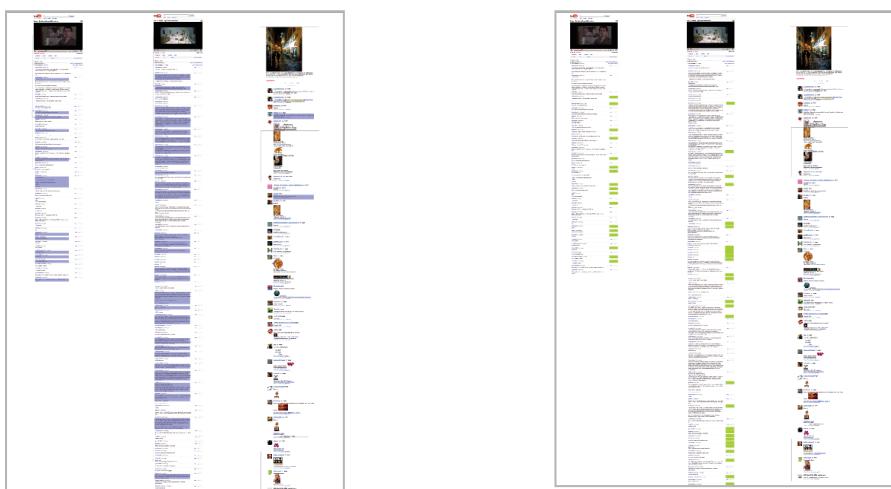
Facebook



3.5.8 Comments and Topology

Research performed on two youtube videos and one flickr image. The goal of the sketches is to recognize patterns with focus on certain aspects such as comment-relations, ratings and evaluation, discussion-threads, hyper references etc.

This pattern research was performed on a clipping of the comments maximally. Just to give a relation: there exist for example videos on youtube with more than 5000 comments.

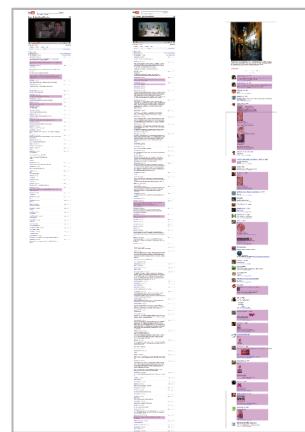


Blue: relations of comments. Distinguished Green: Evaluation and ratings

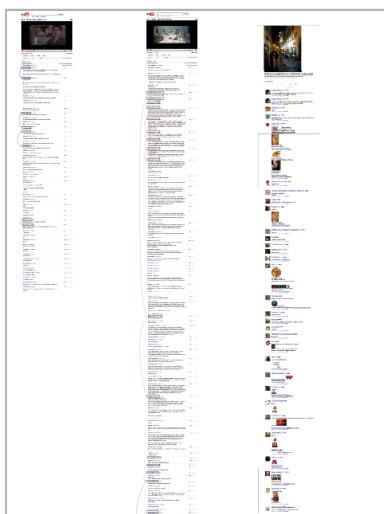
between 'topic relation', 'quotation', 'author mentioning'



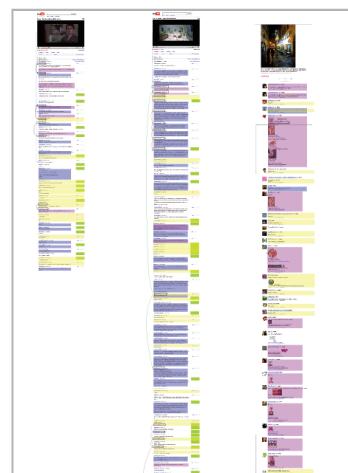
Yellow: Spam and Junk / no additional or no useful information



Violet: Hyper references to other content



Lines: Same user posts several times



Combination of all patterns.

3.5.9 User Tests

Setup: 5 people who are eager comment readers (but not authors) were queried with the following questions:

- 1) How do you read comments?
- 2) How do you get information out of it, is the information valuable to you?
- 3) Where are comments useful to you, where not?
- 4) Do you observe own behavioural patterns while reading comments?

All users indicated to read comments, skimming the page until they found something interesting and then hold on to get the required information or more.

The reading purpose is more often pleasure than serious information retrieval and the information is consumed stochastically: "The newer a comment, the bigger is its chance to be read, independently of its content's quality." [Nils Richter, Software Architect].

Comments which are very old or only accessible by further clicking are only rarely read.

Specific information retrieval is performed on comments on products or in forums, whereas comments on news or movies is more often consumed for pleasure.

Almost all users are not so much interested in meta-data about the author of a comment (how many posts, how active etc). Two Users indicated to have been politically influenced by comments on News.

5. Conclusion

User tests revealed that comments are of big interest to the user (for some even more interesting than the source itself), but that he only gets arbitrarily insight into the information potential of it, mostly actuated by time. Comments are consumed very quickly and stochastically, there is so far a limited way to influence the information retrieval.

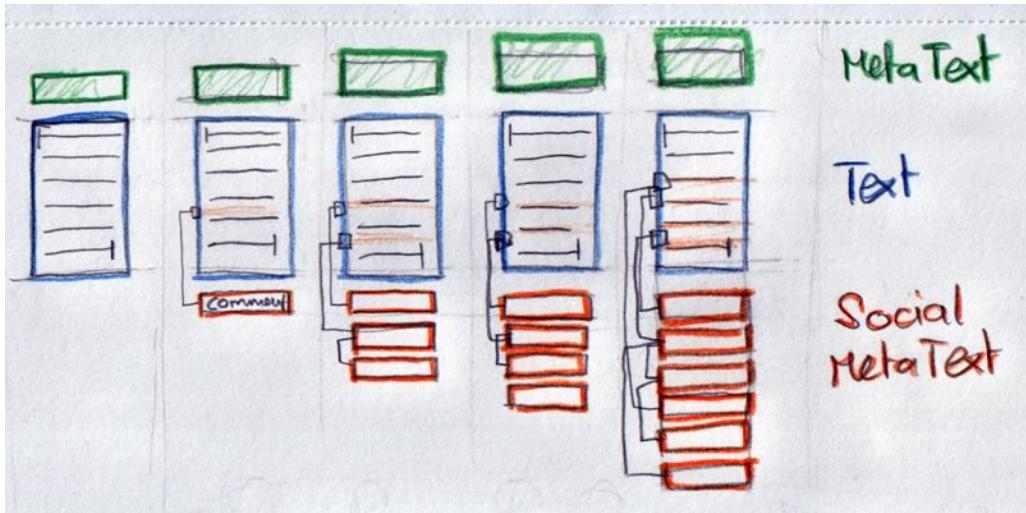
Comments occur in almost every modern web site. Their appearance, functionality and content, however, depend strongly on the context. Also are comments frequented for different purposes. But it has always something to do with information retrieval or formation of opinion. Since comment boards are often flooded with all kinds of junk and spam, research has so far widely neglected comments as a source of information.⁴⁴

3. First explorations/experiments/projects

3.1 E-Text and Reading Iteration

In contrast to traditional print text, electronic text changes with each reading iteration. Be it comments which are added, or just the read-count of the document. This sketch distinguishes between meta-text and social meta-text (comments). The main idea is not to

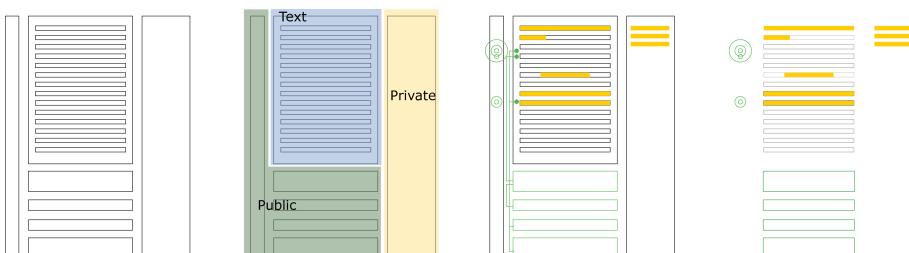
separate these different kinds of information, but to find a way to combine, integrate and merge them into a super-text, providing and carrying relevant information inherently.



3.2 Private vs. Public E-Text

In a primary sketching phase a lot of sketches were realised, which featured a tool to deal with text. The main questions which emerged in this phase were the following:

When a user adds comments or annotations to a text, should this take part publicly or privately? Should a tool make this separation or should it focus on one domain either?



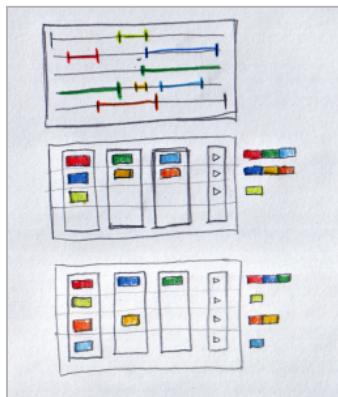
In the original text an edit-mode can be activated where the user can edit the text for research purposes. The output are abstracts referencing to the original texts and are saved in a library.



3.3 Sketches & Ideas

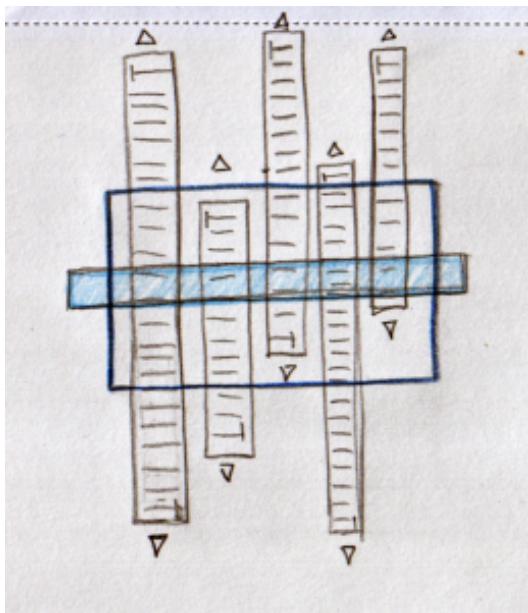
Here are three sketches which were pathbreaking for the later Dynament concept.

3.3.1 E-Textsampling



Sketch for a text sampling application. I used a DJ-Software analogy. The user can arrange text excerpts in stacks. In the stacks the excerpts can be arranged individually. There is as well a master stack, where one can sample a specific arrangement (from left to right).

3.3.2 Associative E-Text



In big texts, it is impossible to view all information at once. This example tries to associatively combine texts and to link contents randomly or filter them on purpose.

3.3. Content commenting

One of the main drawbacks of current commenting systems is, that comments generally just get added at the bottom a text and completely lose the reference to the text or the

comment they refer to. A possible solution to that problem could be accurate commenting which is sketched below. In this sketching phase I still referred to text as any kind of multimedia:

- 1) commenting with text on Video (time gets a new component to be considered)
- 2) commenting with text on Text (accurate referencing, by referring to paragraph or sentence)
- 3) commenting with text and markup on Images



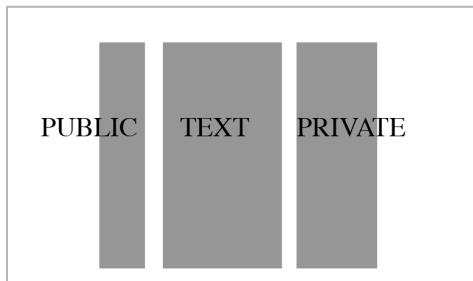
4. Dynament project description

The main concept called Dynament, is arranged (and later implemented) on the online issue of NZZ. Reasons therefore are the following:

- News constitute an ideal field of activity since news always create opinion and therefore harbour enormous commenting potential.
- News-articles are in their length manageable.
- The linearity of written text is a good starting point for further exploration and possible transmission to other media formats.
- The embedding into NZZ gives the project realistic features which proves to be reasonable for the planned exhibition context.

4.1 Core Concept / Private and Public interactions

The main concept hereafter referred to as ,Dynamant' is based on the previously mentioned webuser-percentage-rule.⁴³ Dynamant wants to be as unobtrusive as possible and there is mainly divided into three parts:



The public section shows where and how many comments have been made. This section can either be ignored (if there is no interest in comments) or explored (if you want to read the comments). It is called public, because it is available for everyone and it is the same for everyone.

The text-section is where the main text and the comments are displayed. Again: if a user chooses to not be interested in comments he is free not to render them at all and can read the text as usual.

The private section provides different interaction possibilities for people who would like to comment or interact with comment-contents. It is called private because it is where the individual actions (and interactions) take place. This section is in its foundation the same for everyone, but turns to an individual level when interacting with it (see below: Parameters of interest).

4.2 Comments and parameters of interest

As for the private section the question emerges: What could be interesting data for users to interact with in context with comments. Based on the prior user tests and the research I decided to provide the following functions:

-replying to a comment

- rating a comment
- filter comments due to following parameters: rate-filter, authorship-filter and content-relation-filter

4.4 Accurate referencing

Dynamant features accurate referencing. It is possible to reference to a certain text-paragraph of an article and to discuss it on-site. This feature leads to a concentration of content that belongs together. It further motivates users to thoughtfully comment and improves the accuracy of the discussions.

It firstly was the idea to only implement accurate referencing (meaning the author of comments is forced to comment on a paragraph), but this idea was overthought because it was considered as too obtrusive. So accurate referencing is an option and Dynamant still implements an option to give general comments about articles.

4.5 New text-forms

Dynamant is meant to support new text-forms. In future, text is not coercively written by a single author but rather a collaborative work of a polyvalent community. In the context of written linear text, there will still be a ‚prototype-text‘, written by an individual author, but then again, the community shapes and transforms this text. It is important to keep track of what was written when and who wrote it. Dynamant is a starting point towards this collaborative approach of writing.

4.6 Discussions in Dynamant

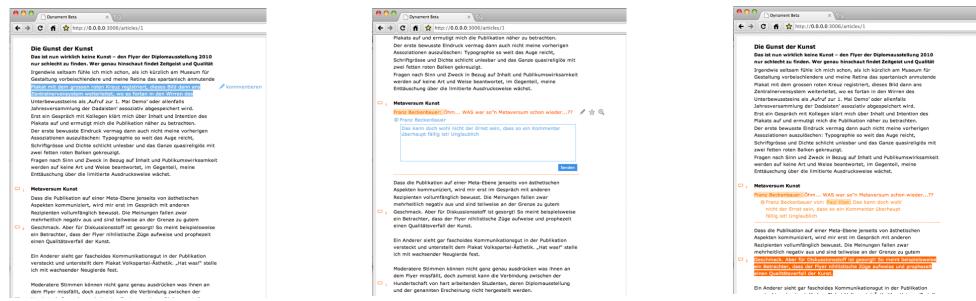
Discussions are an important part of Dynamant. It should be possible to discuss in a general term or to discuss only parts of an article (accurate referencing). A main problem hereby is the conversation depth. If the depth is infinite (e.g. it is possible to comment on a commented comments comment etc.) the requirement for readability is in severe danger. Dynamant therefore proposes only one depth (comment on comment) and the discussion thread is made visible by other yet to be defined means.

4.7 First Prototype Dynament Beta 1.0

The First Prototype was realised with Ruby on Rails and tested with users in a Web-Browser environment. The first prototype was not yet implemented in the NZZ environment and included following features:

- public comment browsing as described in core concept
- accurate commenting functions
- commenting on comments functions

Here are some Screenshots of the first prototype:



5. Evaluation / User Testing

5.1 User Tests Setup

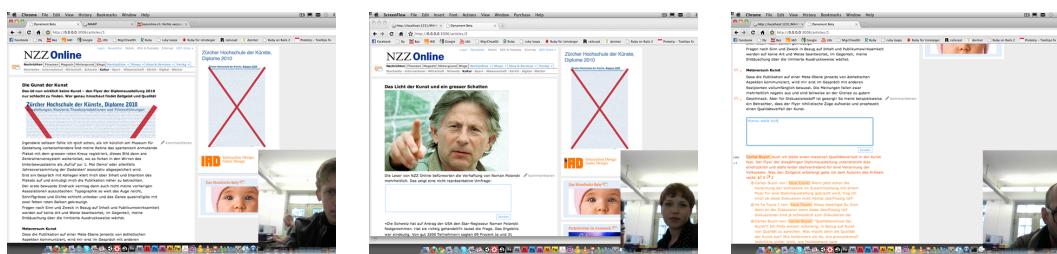
The prototype was tested on 15 Users. Since Dynament addresses mostly computer affine people, I tested it on 10 users which met this criteria. This in order to get a feedback from the main user group. The other 5 probands were people with average computer skills, from whom I hoped to gain insight into problems which more advanced users generally avoid.

The 10 advanced users were only given little information about the project. They were asked to read a highly converse, polarizing article about the flyer of the BA-exhibition. They were additionally asked to comment what they read.

The other 5 probands were given an additional introduction into the concept and were shown certain interactions beforehand.

After the test which each lasted about 5 minutes there was a talk about the experience, weak points, and wishes of users.

Pictures of the Usertests. The tests were performed with Screenflow (Camera and Screenshot tracking):



5.2 User Behaviour

Same as in the Cognitive Walkthrough (see: 3.3 Cognitive Walkthrough) the probands displayed individual behavioural features interacting with Dynamant. Namely the group of advanced users tended to comment on the go, whereas the unexperienced users preferred to first read the article and then place comments.

None of the probands actively perceived the division into private, text and public parts, but almost all of them recognized it as evident and good solved when hinting at the division, in the talks afterwards.

A majority of the probands wanted to see more than just one comment at the same time, but not all comments at once. Two did not succeed in navigating further than the first comment.

Four probands were confused with the difference between commenting on paragraphs and commenting on others users comments (discussing).

Six experienced it as exhausting to comment on paragraphs; four of them had very well an opinion but did not find a suitable paragraph to place it, the other two just did not care about accuracy and felt free to post a comment anywhere.

One proband deleted by mistake the text-input and sent an empty comment.

One proband got confused when more than one text-input box was visible on the screen.

All probands who succeeded in posting a comment found it confusing that the page reloaded without displaying, or at least highlighting their comment.

Four probands were dissatisfied by the discussion depth, it was not clear to them who commented on whose comment and so on.

When asked seven probands indicated to have enjoyed the experience and propagated Dynament an additional value. Four were not convinced by the concept and preferred to not comment at all or to make general comments at the end of the article. Two probands could understand the additional value but did not like to comment with paragraph-accuracy and two did not have a final opinion.

5.3 Users Inputs and Wishes

The probands wishes and inputs were collected and each of it proposed to the next proband. It turned out that many users wished to have easier access to the comments and know more about the type of comment (either it was a single comment or a discussion). They wanted to see more than just one comment at the time, but not all comments at once. One suggestion was to implement a rating system and initially only show the top rated comments. The idea of the rating system was very well received by the next probands.

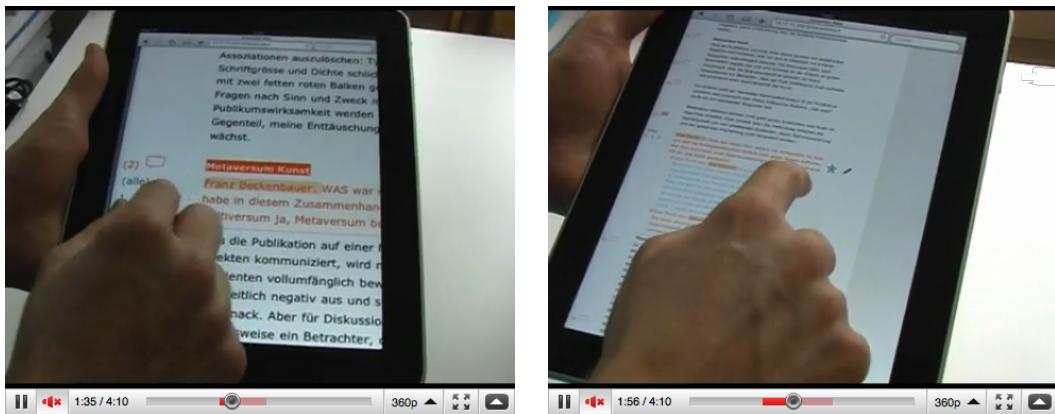
Almost all probands found it difficult not to have the possibility to place general comments at the end of an article and desired to have at least the option to do so. A further suggestion of a proband was to include social media in some kind of form. Another well received suggestion was the wish for a widget, where all the comments for an article are listed, containing hyper references to the main article.

5.4 Tests on other devices / iPad

In the context of News and News media, the new gadget iPad should not be ignored. Dynament is not especially designed for the iPad device. There are some points obviously not working, such as the small navigation links in the public container or the small interaction icons in the private container, which are designed for mouse interactions and not touch.

For the test on the iPad-device I wrote a special iPad-stylesheet which tackled the main size-problems.

Pictures of Dynament & iPad:



The tests worked well on iPad. All the interactions, although not designed for touch, worked in their functional purpose, but did not feel as intuitive as could be.

I conclude that if a device such as iPad is considered in the concept, it must be included in a very early stage of design development. There are many mouse interactions which just are not the same for touch as for the mouse pointer.

6. Analysis and Finding

This part is divided in two sections: 6.1.1 is about what worked or did not work, which was presumed previously. 6.1.2 on the other hand is about problems which I did not presume at all and which were mainly revealed by the user tests.

6.1 What worked or did not work as expected?

As expected the core functionality of Dynament, the commenting and reading of comments works pretty well, which was not that big of a surprise, since it oriented itself mainly on common, well-known conventions.

The public navigation part works in its functional purpose but is considered as not that well designed. The main problems here are: Display of more than one comment, small size of navigation, the repeating of the whole navigation for every comment, missing information about the kind of comment (comment or discussion).

Another problem is the rerendering of the page after a comment has been committed. There must be definitely more visual dynamic guidance to the users interactions with the comments.

As for the visual guidance in discussions, it seems definitely not to be enough to just indicate who responded to whom by simply displaying the usernames. Particularly in long discussions one easily loses the overview.

Further there should definitely be a possibility to place general comments as well as general ratings for an article.

6.2 What worked or did not work unexpectedly?

Not that predictable for me was the problem the users had with the distinction between commenting on paragraphs and commenting on comments (discussing). The tool distincts mainly by the color: If the interaction takes place on the public layer , color is orange, whereas if the interaction is performed in the private section, it is blue. When probands try to reply on a comment, they often comment again on the paragraph, which against the will of the concept, does not lead to discussions.

Another point which was unexpectedly unclear to the probands, was the embedement of Dynamant into a news and media context, which will hopefully be resolved when embedding the iterated prototype in the NZZ-Online format.

7. Final/Iterated Prototype Dynament Beta 2.0

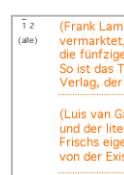
7.1 Improvements from Beta 1.0 to Beta 2.0

Public Navigation: The public navigation to browse the comments now distinguishes between comments and discussions. Discussions are now having an overline over the number. The navigation-panel has as well been slightly enlarged. The navigation control is now only shown once and not repeated for all comments. At the moment the most actual three comments are shown (instead of only one).

Beta 1.0



Beta 2.0



Page Reload: The page reload in Beta 2.0 is extended with a functionality that jumps right back to the paragraph where the user made the comment. Not implemented is that the comment should as well be displayed immediately.

Beta 1.0

NZZ Online
30. April 2010, 10:52, NZZ Online

Frisch gehört der Nachwelt – ganz

(2) Frisch lebt: Seine Romane werden gelesen, seine Stücke gespielt. In nahezu jede politisch-intellektuelle Debatte ragt seine Gestalt hinein – als Vorbild, als Forderung. Nun ist, wie letzten Sommer bekannt wurde, ein Werk aus dem Nachlass aufgetaucht; ein Tagebuch aus dem Jahr 1982, zwar ein Fragment, aber doch in Schriftform weit gediehen. Frisch hatte es seiner Sekretärin Rosmarie Primault diktiert, die das Typoskript mit einiger Verspätung dem MaxFrisch-Archiv übergab.

Beta 2.0

(1) Max Brod einst dem Willen des Autors klar zuwidergehandelt. Zu Recht und zum Glück. Auch der unfeierte vierte Band von Elias Canettis Autobiografie ist 2003 erschienen – mit Sätzen, die der Autor zweifellos gestrichen hätte, wenn er noch gelebt hätte. Aber jeder Fall liegt ein wenig anders.

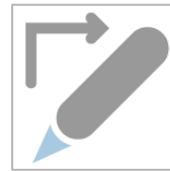
Mitte März brachte «Die Zeit» Auszüge aus Frischs drittem Tagebuch; dazu stellte sie zwei Artikel, die sich ironischerweise eher gegen eine Publikation aussprechen von Adolf Muschg, bis vor Kurzem Stiftungsrat der Max-Frisch-Stiftung, und von

Replying on a paragraph vs. replying on a comment: To make it more clear Beta 2.0 features two different icons: one for commenting on a paragraph and another for commenting on a comment.

Beta 1.0



Beta 2.0



Discussion and orientation: Beta 2.0 highlights on rollover the users involved in a discussion. This makes it easier to follow up discussion-threads and reveals the inherent relationship of comments in discussions.

Beta 1.0

Wayne Fankhauser: asadfsadf
@Wayne Fankhauser von: Lionel Messi: dddd
@Wayne Fankhauser von: Paul Klee: üpoiuzu

Beta 2.0

Wayne Fankhauser: asadfsadf
@Wayne Fankhauser von: Lionel Messi: dddd
@Wayne Fankhauser von: Paul Klee: üpoiuzu

7.2 New features Dynamant 2.0

All Comments and reference to paragraph: At the end of each article the user has the possibility to display all comments belonging to the article. The comments which were originally written to a paragraph feature a link, that jumps directly to the paragraph where the comment has originally been posted.

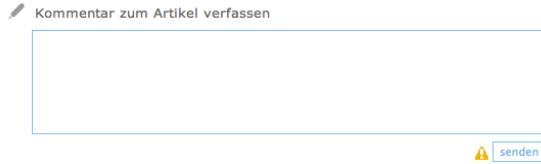
Beta 2.0

 Alle Kommentare ausblenden

- Lionel Messi: this is a comment 
- Thierry Henry: this is a comment too 
- Paul Klee: i am a comment to the articler 

General Comments: Beta 2.0 includes the possibility to make general comments to articles. These comments are listed as usual at the bottom of the article.

Beta 2.0



Embedding into NZZ Online skin: Beta 2.0 is embedded in a fake NZZ-Online environment. Most NZZ-links are not available but add up to the appearance and the general feeling.

Beta 2.0



Setting up several articles environment: Beta 2.0 features 5 different articles, so there is a certain variety of articles users can choose from. As for the exhibition the articles are differently populated with comments (from none to many). The exhibition is therefore another kind of user test, in regard of response volume of comments.

Beta 2.0



Title of articles:

- Das Moraleische Baby
- Das Licht der Kunst und ein grosser Schatten
- Partychristen im Anmarsch
- Die Gunst der Kunst
- Wie Picasso zu Geld wird

7.3 Conceptual improvements / suggestions (not implemented).

Rating System: Only conceptually contemplated is a rating system for comments (Beta 2.0 features a concept video for the exhibition) the idea is, that comments not only indicate the quality or controversy of a paragraph, but also are relevant for sorting criteria.

Beta 3.0

vero eos et accusam et justo duo dolores et ea rebum.

Karl Kleberiz Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet. Lorem ipsum dolor sit amet. 5 2

Social Media: As well, only conceptually contemplated: social media connectivity (Beta 2.0 features a concept video for the exhibition). Showcase social media are Facebook and Twitter.

Beta 3.0

(3) Das ist nun wirklich keine Kunst – den Flyer der Diplomausstellung 2010 nur schlecht zu finden. Wer genau hinschaut findet Zeitgeist und Qualität

kommentieren

Julian Schütt, der an einer Frisch-Biografie sitzt. Schütt referierte aber auch die Argumente des Stiftungsratsvorsitzenden Peter von Matt, der das Tagebuch im Suhrkamp-Verlag herausgibt. Der Stiftungsrat ist allein zuständig für alle Fragen des literarischen Nachlasses.

(alle) (Julio César) Dürrenmatt wurde von seiner "Letzten" noch als Untoter vermarktet, Firschi blieb dieses Schicksal erspart. Die grosse Zeit von Frisch waren die fünfziger Jahre, das spätere Werk hat - unter uns - kaum mehr jemand gelesen.

(Frank Lampard) @Julio César Dürrenmatt wurde von seiner "Letzten" noch als Untoter vermarktet, Firschi blieb dieses Schicksal erspart. Die grosse Zeit von Frisch waren die fünfziger Jahre, das spätere Werk hat - unter uns - kaum mehr jemand gelesen. So ist das Tagebuch letztlich ein Zeugnis für den naturbedingten Zerfall, wie für den Verlag, der es publiziert. So ist das Tagebuch letztlich ein Zeugnis für den Verlag, der es publiziert. So ist das Tagebuch letztlich ein Zeugnis für den naturbedingten Zerfall, wie für den Verlag, der es publiziert.

Senden

Filters: As well conceptually contemplated: Filters that can be applied in the private section to filter comments for keywords (Keywordfilter as concept video implemented in Beta 2.0 for exhibition purposes).

(2) Julian Schütt, der an einer Frisch-Biografie sitzt. Schütt referierte aber auch die Argumente des Stiftungsratsvorsitzenden Peter von Matt, der das Tagebuch im Suhrkamp-Verlag herausgibt. Der Stiftungsrat ist allein zuständig für alle Fragen des literarischen Nachlasses.

(alle) (Julio César) Dürrenmatt wurde von seiner "Letzten" noch als Untoter vermarktet, Firschi blieb dieses Schicksal erspart. Die grosse Zeit von Frisch waren die fünfziger Jahre, das spätere Werk hat - unter uns - kaum mehr jemand gelesen.

(Frank Lampard) @Julio César Dürrenmatt wurde von seiner "Letzten" noch als Untoter vermarktet, Firschi blieb dieses Schicksal erspart. Die grosse Zeit von Frisch waren die fünfziger Jahre, das spätere Werk hat - unter uns - kaum mehr jemand gelesen. So ist das Tagebuch letztlich ein Zeugnis für den naturbedingten Zerfall, wie für den Verlag, der es publiziert. So ist das Tagebuch letztlich ein Zeugnis für den naturbedingten Zerfall, wie für den Verlag, der es publiziert.

(9) Das Gremium entschied sich mit 4:1 klar für eine Veröffentlichung. Konsequenzen kann die Debatte - Andreas Isenschmid nennt sie in der «NZZ am Sonntag» eine «geistverlassene Banauseindebatte» - also keine mehr haben. Streiten darf man trotzdem nach Herzenslust. Wie lauten die Argumente?

(alle) (Frank Lampard) Dürrenmatt wurde von seiner "Letzten" noch als Untoter vermarktet, Firschi blieb dieses Schicksal erspart. Die grosse Zeit von Frisch waren die fünfziger Jahre, das spätere Werk hat - unter uns - kaum mehr jemand gelesen. So ist das Tagebuch letztlich ein Zeugnis für den naturbedingten Zerfall, wie für den Verlag, der es publiziert.

8. Conclusion

8.1 The concept

The perpetual change in practise with digital reading, which was already outlined in the research part, found shape in my inquiry, context-inquiry and user testing. The observation, that the future reader will more and more be part of a collaborative writing and commenting machinery, proved to be right: almost all news and media websites feature commenting and rating systems, whose contents are mainly produced by a community of registered users. The amount of information and disinformation produced

in such self-sustaining systems is vast. The presentation of contents leaves a lot to be desired. The state of the art presentation form for news articles is to just list comments on newarticles at the end of the article, where they are mostly sorted by time and only offer very few interaction and filter-possibilities.

As I was in the middle of the conceptual design of Dynament, I discovered that the video platform youtube⁴⁵ completely changed its design and with it rearranged its commenting concept. As in Dynament the point of time when a comment was made gets increasingly insignificant, since the top rated comments are shown first. The fact that big companies as google deal with similar problems, gives the concept of Dynament a right to exist. The main questions that emerge are: What kind of filter or sort functionality should be provided? With what kind of interaction shall they be made accessible? I'd like to answer these questions in the following section in regard of the prototype.

8.2 The prototype

For conclusions concerning the prototype, I chiefly refer to the user tests performed on Beta 1.0, and in addition to the ongoing user test, which is Beta 2.0, currently exhibited at the ‘Diplomausstellung’.

Again I refer to the percentage-rule ⁴³ which says, that only ten percent of users interact with (comment on) web contents. That implies that the majority still just wants to read contents and comments, which makes it hard to measure results on the exhibited prototype, since only few visitors make the effort to interact with the model, as if it were in a realworld-context. The allegation that a tool like Dynament encourages readers to contribute and write comments is not confirmed so far. But as mentioned before, the tendency towards a participatory web usage is given.

With the concept of accurate commenting the problem of information overflow is indeed eased, but remains unresolved. As soon as we deal with a certain amount of content the problems reappear. This is the point where additional filters get crucial. These filters are not yet implemented in the prototype and weaken the user experience on the level of prototype usage.

The transmission of the prototype from the computer web browser to a browser of a device such as iPad can be regarded as failed. The conceptual design of the prototype must consider the device where it should run on, in an earlier stage of development. However, the concept itself, still harbours enough potential to be applied to an iPad-device.

8.3 Dynament perspectives

To conclude Dynament as a concept is simple in its main ideas and harbours potential to be deployed in a real-world issue. Its application will show its acceptance, and the grade of its acceptance will anticipate its grade of developmental potential.

9 Annex

Full documentation and process Blog: www.meta-vue.ch/BAdocu

Working Prototype Beta 2.0: www.meta-vue.ch/dynamant_beta/

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